

## ABSTRACT OF THE DISCLOSURE

A system (S') for non-contact measurement of a relative displacement or relative position of a first object relative to a second object, has: a sensor module including a transmitter plate fixed to the first object and a receiver plate connected to the second object, arranged substantially facing each other and provided with respectively transmitting and receiving electrodes; and an electronic module designed to apply on the transmitting electrodes high-frequency excitation signals, and to process measurement signals derived from the receiving electrodes. The transmitting and receiving electrodes are designed to constitute a first variable capacitance based on the relative misalignment of the plates. The electronic module is designed to perform an analog calculation of a first signal representing the inverted capacitance and of a second signal representing the ratio of the second capacitance over the first capacitance. The invention is in particular useful for controlling segmented mirrors in large telescopes.